

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant : Thomas Apple et al.  
Serial No. : 08/736,143  
Filed : October 28, 1996  
Title : MEDIA WALL FOR DISPLAYING FINANCIAL INFORMATION

Art Unit : 2672  
Examiner : Blackman, A.

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Board of Patent Appeals and Interferences  
Commissioner for Patents  
Washington, D.C. 20231

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BRIEF ON APPEAL

(1) Real Party in Interest

The NASDAQ Stock Market, Inc.

(2) Related Appeals and Interferences.

None.

(3) Status of Claims

Claims 1-38 are in the case. (See Appendix of Claims)

Claims 1-3, 6-13, 15 and 16<sup>1</sup> were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins") in view of U.S. Patent No. 5,523,769 ("Lauer").

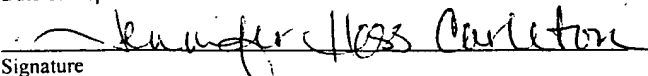
<sup>1</sup> Claim 16 was not mentioned in the summary of the Examiner's rejection but was treated as rejected in the body of this rejection.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

May 16, 2002

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Jennifer Hess Carleton

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Claims 4-5, 17-31, 37 and 38<sup>2</sup> were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins") in view of U.S. Patent No. 5,523,769 ("Lauer") and further in view of U.S. Patent No. 5,761,689 ("Rayson").

Claims 32-36 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,270,922 ("Higgins").

Claim 34 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins") in view of U.S. Patent No. 5,761,689 ("Rayson").

Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins"), in view of U.S. Patent No. 5,761,689 ("Rayson"), further in view of U.S. Patent No. 5,523,769 ("Lauer") and still further in view of U.S. Patent No. 5,339,392 ("Risberg").

#### (4) Status of Amendments

No amendments have been filed after the Office Action of March 26, 2002 being appealed. Appellants filed a prior Brief on Appeal on December 10, 2001 that resulted in the Office Action being appealed from.

#### (5) Summary of Invention

##### I. Background

The invention relates to an improved mechanism for displaying financial trading information. As described in the Background of the Invention section of the application, alphabetic abbreviations (commonly referred to in the art as "stock ticker symbols") have been used to identify securities and their financial trading information since the days of paper, ticker tape reports. Later technologies have changed the medium of these reports from paper to electronic, but have not altered the means used to identify the financial trading information of a given security.

Many people interested in following securities, including some seasoned stock analysts, find the alphabet abbreviations in these displays difficult to follow. In particular, many people

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find it difficult to remember more than a small subset of the many alphabetic abbreviations assigned by a given stock exchange. Compounding this problem is the fact that, due to historical anomalies and other factors, the assigned alphabetic abbreviations can appear random and may not even attempt to identify a particular traded security. In fact, some assigned alphabetic abbreviations may purport to identify a particular security of a well-known company, when in fact it actually identifies a security of a less well-known company.

## II. Appellants' Invention

The inventors of the pending application conceived of a new, more easily interpreted display for trading information. In particular, the inventors conceived using graphic symbols, such as firm or corporate logos, to replace alphabetic abbreviations as identifiers for values of each security's financial trading information in a financial display. Appellants' invention offers several non-obvious and important advantages over the older styled displays, including reduced confusion amongst traders observing the displayed financial information and increased brand awareness for the securities traded on an exchange employing the invention.

As is explained in detail below, the primary reference Higgins and the combination of references with Higgins on which rejections in the office action are based fall well short of describing or suggesting the claimed invention.

### (6) Issues

The issues on appeal are:

1. Whether claims 1 to 31, 37 and 38 are unpatentable where Appellants' invention represents a classic reversal of long standing conventional practice and wisdom and Higgins, the primary reference in combination with other references to reject the claims, merely discloses the conventional approach and none of the secondary references supply the missing teachings.
2. Whether claims 18 to 26, 28 to 29, and 34 are unpatentable where the references do not suggest the desirability of combining what is disclosed therein to meet the terms of the rejected claims.
3. Whether claims 32 to 36 are unpatentable where the references relied upon do not disclose recited limitations.

(7) Grouping of Claims

The claims in each group do not stand or fall together.

(8) Summary of the Examiner's Reasons for the Rejection

In the Office Action of March 26, 2002, the Examiner removed all prior rejections of the claims over references to Marshall U.S. Patent 5,675,746, Risberg U.S. Patent 5,339,392 and Lauer U.S. Patent 5,523,769.

In the March 26, 2002 Office Action being appealed from the examiner set out five new bases for rejection of the claims. These rejections were all based on U.S. Patent No. 5,270,922 ("Higgins") taken alone or in various combinations with U.S. Patent No. 5,523,769 ("Lauer"), U.S. Patent No. 5,761,689 ("Rayson") and U.S. Patent No. 5,339,392 ("Risberg").

In the Office Action, the Examiner stated in part:

Higgins discloses "a data processing and communication system [that] ... comprising ... the means of a database that stores graphic symbols that represent entities whose financial instruments are identified by instrument identifiers in the feed and that can be accessed by financial instrument identifiers to provide graphic symbols corresponding to the financial instrument identifiers in the feed (Fig. 3, Abstract, lines 8-12, col. 6, line 16 to col. 7, line 28, and col. 9, lines 25-29); a display controller for forming display signals with the graphic symbols and values corresponding to financial instruments in the feed (col. 2, lines 15-18, col. 3, lines 30-40); ...

(9) Argument

- I. Claims 1 to 31, 37 and 38 are distinct where appellants' invention defies long standing conventional practice and Higgins the primary reference merely restates prior conventional wisdom and the secondary references fail to supply the missing teachings.**

Appellants urge the Board to overturn a rejection of claims to an invention that, while perhaps appearing simple in hindsight, represents a classic reversal of long standing conventional practice and wisdom. The rejection is particularly unsound because the primary reference simply

restates the prior conventional wisdom, and the other references fail to supply the missing teachings of Appellants' invention.

The prior art conventional practice is described in Higgins, and is relied upon by the Examiner in each of his rejections. Higgins carries forward the age-old stock ticker symbol format, in which stock values are juxtaposed with alphabetic abbreviations representing the names of companies. For decades now, the proliferation of companies trading their stocks has produced an alphabet soup of often-arbitrary abbreviations that have made the various stock tickers difficult to follow and interpret. Yet, the alphabetic tradition is so engrained in history and culture that its use in financial displays has persisted since the inception of the ticker tape in the late 1860s.

Appellants' invention makes a sharp break from this tradition by displaying graphic symbols, such as a company logo, in juxtaposition with financial instrument values in an electronic display. In embodiments of the invention, the company logo and juxtaposed values are displayed as a logo-based stock ticker that moves across a monitor.

The Examiner relies on his primary reference Higgins for the use of graphic symbols. But Higgins actually is devoid of any teachings of graphic symbols in combination with financial values. In fact the word "graphic" is not mentioned once in Higgins, nor does Higgins teach any equivalent to a graphic symbol that represents an entity whose security is identified by instrument identifiers in a feed. Instead Higgins simply teaches the conventional alphabetic abbreviation stock ticker symbol.

Figure 2, item 143 in Higgins is illustrative of teaching of stock ticker symbols:

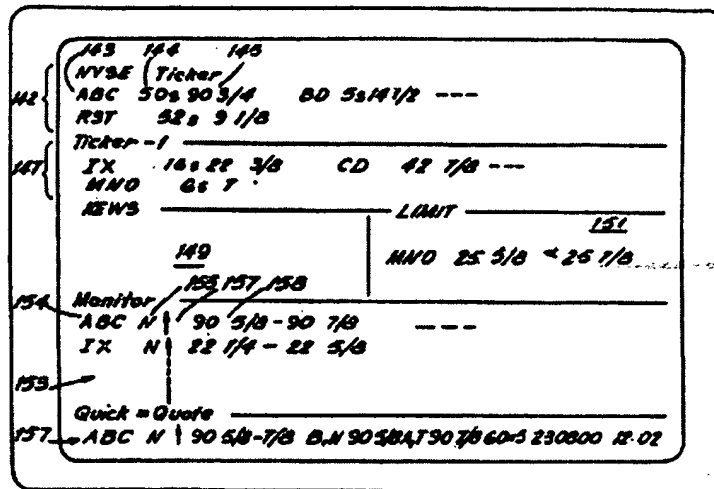


FIG. 2

Appellants' invention, to the contrary, presents a new and improved display of financial trading information. In particular, each of the independent claims of Appellants' invention is directed toward using *graphic symbols or company logos* instead of a security's alphabetic abbreviation in juxtaposition with the *values or textual data* of its trading information.

For example: claim 1 requires monitors to "render the *graphic symbols and values* corresponding to the financial instruments"; claim 15 requires monitors to display "*graphic symbols and values* corresponding to the financial instruments"; claim 16 requires displaying "*graphic symbols and values* corresponding to the financial instruments in the feed"; claim 17 recites scrolling market data comprising "a *company logo* juxtaposed with financial instruments including real-time *textual data*"; and claim 27 recites displaying market data comprising "a *company logo* and stock ticker real-time *textual data* associated with the company logo." (*Emphasis added*). Thus, each of Appellants' independent claims in this set is directed toward using graphic symbols, such as firm or corporate logos, to identify the actual values or textual data of a security's financial trading information.

The Examiner's rejections are contrary to fundamental doctrines governing the resolution of obviousness questions. Inventions are *not* obvious when they defy long standing conventional practice.

At law:

Obviousness

[P]roceeding contrary to the accepted wisdom is "strong evidence of unobviousness." *In re Hedges*, 783 F.2d 1038, 1041, 228 USPQ 685 (Fed. Cir. 1986) citing *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1552, 220 USPQ 303 (Fed. Cir. 1983).

Indeed, the years of use of conventional stock tickers and corporate logos by those of skill in the art without combining their properties weighs *strongly against* a finding that the combination is obvious. See *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 958 (Fed. Cir. 1997) (reversing a district court decision where "years of use of salty bait and of plastic lures, without combining their properties, weighs on the side of the unobviousness of the combination").

By ignoring these fundamental legal principles, the Examiner has resorted to hindsight reconstruction, an additional violation of settled authority:

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.<sup>15</sup> This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."<sup>16</sup> *In re Fritch*, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

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<sup>15</sup> *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

<sup>16</sup> *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600.

As the Federal Circuit Court of Appeals said in *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614 (Fed. Cir. 1999):

Measuring a claimed invention against the standard established by §103 requires the oft-difficult but critical step of casting the mind back to

the time of the invention, to consider the thinking of one of ordinary skill in the art, guided only by the references themselves.... Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the inventions can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.'

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification" *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Accordingly, the rejections to claims 1-31, 37 and 38 should be reversed.

**II. Claims 18 to 26, 28 to 29, and 34 are patentable where the references do not suggest the desirability of combining what is disclosed therein to meet the terms of the rejected claims.**

A number of the rejected dependent claims contain additional limitations that further weigh in favor of non-obviousness. In particular, dependent claims 18-26, 28-29, and 34 each require a bit map data corresponding to a company logo.

A review of Rayson fails to provide any motivation for its combination with Higgins and Lauer for rejecting claims 18 to 26, 28 and 29. Rayson does not relate to the display of financial information. Rayson describes an auto correcting text feature in a word processing application. The feature allows a user to select amongst a plurality of auto-correct options. These options allow the user to change straight quotes to smart quotes, correct words that begin with initial uppercase letters, modify capitalizing the first letter of any sentence that is not capitalized, and replace text entered by the user with either plain text, formatted text, a graphic picture or other type of object. Types of graphics that Rayson describes are a logo or a picture. In Rayson a user



manually configures the auto-correct feature to replace typed text with the graphic in a word processor document.

At law:

In determining obviousness, "[t]he claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 USPQ 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 USPQ 26, 31 (Fed. Cir. 1985).

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

When viewing the invention as a whole, it is clear that the prior art does not suggest the desirability of modifying Higgins and Lauer with Rayson. Neither Higgins nor Lauer motivate one of ordinary skill in the art to look to graphic symbols, corporate logos or bit map images to solve the identification problems resulting by the use of conventional stock ticker symbols. Moreover, Rayson does not suggest the desirability of replacing stock ticker symbols to juxtapose a graphic symbol with financial data. Thus, absent any suggestion to combine their teachings, there is no motivation found for using logos or bit map data in a manner taught and claimed by Appellants. Accordingly, claims 18-26, 28 and 29 are nonobvious over the art of record and the rejections of those claims should be reversed.

**III. Claims 32 to 36 are patentable for the additional reason that the reference relied upon does not disclose recited limitations.**

Claims 32 to 36 contain limitations that are not described by Higgins. For example, claim 32 requires accessing graphic symbols in accordance with extracted instrument identifiers and claim 36 requires retrieving graphics symbols associated with extracted identifiers. Higgins does not disclose, either explicitly or inherently, these limitations. The examiner considers that Higgins discloses, "a database that stores graphic symbols that represent entities whose financial instruments are identified by instrument identifiers." This is incorrect. Higgins discloses stock ticker alphabetical symbols not graphic symbols. Higgins stores the stock ticker symbols to form a list of followed stocks. Higgins does not use the stock ticker symbol to access a database of graphic symbols that represent entities whose financial instruments are identified by instrument identifiers. Rather, as clearly shown in FIG. 4 of Higgins, the stock ticker symbol from an incoming ticker message is used to access a database to see if it corresponds to one of stored stock ticker symbols on a user's followed stocks list or defined list of securities to construct a ticker. Nowhere does Higgins disclose or suggest that an identifier in an incoming stock ticker message is used to retrieve a graphic symbol that represents an entity's financial instrument identified by the ticker message.

At law:

Anticipation

A claim is "anticipated," when a single prior art reference discloses all features spelled out in the claim, either explicitly or inherently. *Tyler Refrigeration v. Kysor Indus. Corp.*, 777 F.2d 687, 689 (Fed. Cir. 1985); *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991); *Glaverbel Societe Anonyme v. Northlake Marketing & Supply, Inc.*, 45 F.3d 1550 (Fed. Cir. 1995).

Accordingly, Higgins cannot anticipate claims 32 and 36. Claim 32 requires displaying the financial instrument ticker, as a moving financial instrument ticker of graphic symbols juxtaposed with corresponding values of the financial instruments across a video display. Higgins does not describe this action and hence cannot anticipate claim 32 and dependent claims 33-35. Higgins also does not describe displaying on a monitor the graphic symbols juxtaposed

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with values corresponding to the financial instruments, as in claim 36 and hence cannot anticipate claim 36. Accordingly, claims 32-36 are not anticipated by the art of record and the rejection of those claims should be reversed.

### Conclusion

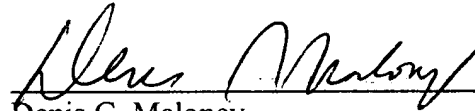
For the foregoing reasons, it is submitted that the Examiner's rejections of claims 1-3, 6-13 and 15; claims 4-5 and 17-31; claims 32-36; claim 34; and claim 14 are erroneous, and reversal of the decision is respectfully requested.

The fee for submission of the brief of \$320 was already paid when the previous brief was submitted. We believe that no fee is due. If this is incorrect please charge this fee and apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: \_\_\_\_\_

5/16/02



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### Appendix of Claims

1. A system for dynamically displaying graphic symbols and value information for financial instruments comprising:
  - an input port to receive a feed containing identifiers and corresponding values of financial instruments;
  - a filter to extract from the feed the identifiers and corresponding values of the financial instruments;
  - an input processor comprising a memory to store the extracted financial instrument identifiers and corresponding values;
  - a database that stores graphic symbols that represent entities whose financial instruments are identified by the instrument identifiers in the feed and that can be accessed by financial instrument identifiers to provide graphic symbols corresponding to the financial instrument identifiers in the feed;
  - a display controller for forming display signals with the graphic symbols and values corresponding to the financial instruments in the feed; and
  - a video wall including
    - a plurality of individual monitors arranged into a composite display, and with the display controller receiving the display signals to render the graphic symbols and values corresponding to the financial instruments in the feed on the individual monitors.
2. The system of claim 1 wherein the feed is a stock ticker feed and the financial instruments are stocks traded over an exchange.
3. The system of claim 2 wherein the values include the current trading price of the stocks.
4. The system of claim 3 wherein the graphic symbols include corporate logos for companies issuing the stocks.

5. The system of claim 4 further comprising:  
a control system and wherein the control system processes the display signals such that the video wall displays a moving ticker display of corporate logos and values of trades in stocks.

6. The system of claim 1 wherein the display controller further includes a plurality of display processors coupled to the input processor and each provided from a respective one of the plurality of display signals.

7. The system of claim 6 further including a network to couple the input processor to the plurality of display processors.

8. The system of claim 7 further including a control processor coupled to the display processors and the input processor via the network to synchronize the display processors.

9. The system of claim 1 wherein the display signals are fed to the individual monitors to render a different graphic symbol and associated financial data on each of the monitors.

10. The system of claim 6 wherein the feed is a stock ticker feed, and wherein the display processors include stock ticker display processors to display a moving stock ticker on the video wall.

11. The system of claim 1 wherein the video wall further includes video wall processors for processing the display signals for display on the monitors.

12. The system of claim 1 further including a plurality of routing switches coupled between the display controller and the video wall for controlling the routing of the display signals to the monitors.

13. The system of claim 1 further including a video source, coupled to the routing switches, for producing video signals for display on the video wall.

14. The system of claim 1 further including:  
an audio source for producing audio signals; and  
a speaker to produce the audio signals..

15. A system for dynamically displaying financial information comprising:  
a first input port for receiving a first feed containing identifiers and corresponding values of financial instruments;

a second input port for receiving a second feed containing financial data;

a filter to extract from the first feed the identifiers and corresponding values of the financial instruments and from the second feed the financial data;

a memory to store the extracted financial instrument identifiers, corresponding values, and financial data;

a data structure associating the extracted financial instrument identifiers with corresponding graphic symbols, the graphic symbols being publicly acknowledged identifiers of entities whose financial instruments are identified by the instrument identifiers in the feed;

a video processor to produce a first display signal with the graphic symbols and values corresponding to the financial instruments in the feed and a second display signal with the financial data; and

a video wall including

a plurality of individual monitors arranged into a composite display to receive the first and second display signals and display the financial data and the graphic symbols and values corresponding to the financial instruments.

16. A method for dynamically displaying graphic symbols and value information for financial instruments on a video wall including a plurality of individual monitors arranged into a larger display, the method comprising:

receiving a feed containing identifiers and corresponding values of financial instruments;

extracting from the feed the identifiers and corresponding values of the financial instruments;

storing the extracted financial instrument identifiers and corresponding values;

using the extracted financial instrument identifiers to find graphic symbols that are logos of entities associated with the extracted identifiers;

forming a display signal with the graphic symbols and values corresponding to the financial instruments in the feed; and

displaying on the video wall the graphic symbols and values corresponding to the financial instruments in the feed.

17. A system for displaying stock ticker information comprises:

a display; and

an electronic device that produces a signal that when fed to the display scrolls market data across the display, said market data comprising a company logo juxtaposed with financial information including real-time textual data associated with financial instruments of entities identified by instrument identifiers in a feed received by the system.

18. The system of claim 17 wherein the electronic device is a computer, and the computer is responsive to a source containing financial information and a source that contains bit map data corresponding to the company logo.

19. The system of claim 18 wherein the financial information includes company identifiers and wherein the company identifiers are used to access bit maps corresponding to the company logos.

20. The system of claim 18 wherein the source of bitmaps is contained in a database of logo bitmaps.

21. The system of claim 18 wherein the source containing financial information is a database of financial data.

22. The system of claim 18 wherein the real-time textual data scrolled on the display are updated according to market conditions.

23. The system of claim 22 further comprising a filter coupled to a source containing financial data, said filter extracting the real-time textual data and placing the real-time textual data in a database.

24. The system of claim 17 further comprising a correlator that correlates a bitmap of a company logo with financial data contained in a database.

25. The system of claim 24 wherein the real-time textual data scrolled on the display are updated according to market conditions.

26. The system of claim 24 further comprising a filter coupled to a source containing financial data, said filter extracting the financial data and placing the financial data in a database.

27. A method for displaying stock ticker information comprises:  
displaying market data across an electronic monitor, said market data comprising a company logo and stock ticker real-time textual data associated with the company logo, the real-time textual data juxtaposed with the company logo.

28. The method of claim 27 wherein displaying associates a data source containing financial information and a data source that contains bit map data corresponding to the company logo.

29. The method of claim 28 wherein the financial information includes company identifiers and wherein the company identifiers are used to access bit maps corresponding to the company logos.



30. The method of claim 27 wherein displaying market data occurs with market conditions.

31. The method of claim 27 further comprising filtering the source containing financial data, and extracting the data to place the data in a database.

32. A method for displaying stock ticker information comprises:  
extracting from a data feed having values of financial instruments, instrument identifiers and the values of the financial instruments;  
accessing graphic symbols in accordance with the extracted instrument identifiers;  
associating the graphic symbols with the corresponding values of the financial instruments to produce a financial instrument ticker; and  
displaying the financial instrument ticker, as a moving financial instrument ticker of graphic symbols juxtaposed with corresponding values of the financial instruments across a video display.

33. The method of claim 32 wherein the data feed of values includes identifiers that correspond to the financial instruments, and wherein accessing comprises:  
accessing the graphic symbols by using the identifiers to associate the graphic symbols with the financial data.

34. The method of claim 32 further comprising:  
correlating a bitmap of a company logo with financial information contained in a database.

35. The method of claim 32 further comprising  
updating data on the financial instrument ticker in accordance with current market conditions.

36. A method for dynamically displaying graphic symbols and value information for financial instruments, the method comprising:

receiving a feed containing identifiers and corresponding values of financial instruments;  
extracting from the feed the identifiers and corresponding values of the financial instruments;

retrieving graphic symbols associated with the extracted identifiers;  
forming a display signal including the retrieved graphic symbols and values corresponding to the financial instruments; and

displaying on a monitor the graphic symbols juxtaposed with values corresponding to the financial instruments.

37. The system of claim 17 wherein the market data corresponds to trades in financial instruments and the company logo is associated with financial information corresponding to a market price for the financial instrument.

38. The method of claim 27 wherein the stock ticker information comprises trades of financial instruments.

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Date of Deposit                      May 16, 2002

\_\_\_\_\_  
Signature                      Jennifer Hess Carleton

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Typed or Printed Name of Person Signing Certificate  
Jennifer Hess Carleton

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find it difficult to remember more than a small subset of the many alphabetic abbreviations assigned by a given stock exchange. Compounding this problem is the fact that, due to historical anomalies and other factors, the assigned alphabetic abbreviations can appear random and may not even attempt to identify a particular traded security. In fact, some assigned alphabetic abbreviations may purport to identify a particular security of a well-known company, when in fact it actually identifies a security of a less well-known company.

## II. Appellants' Invention

The inventors of the pending application conceived of a new, more easily interpreted display for trading information. In particular, the inventors conceived using graphic symbols, such as firm or corporate logos, to replace alphabetic abbreviations as identifiers for values of each security's financial trading information in a financial display. Appellants' invention offers several non-obvious and important advantages over the older styled displays, including reduced confusion amongst traders observing the displayed financial information and increased brand awareness for the securities traded on an exchange employing the invention.

As is explained in detail below, the primary reference Higgins and the combination of references with Higgins on which rejections in the office action are based fall well short of describing or suggesting the claimed invention.

### (6) Issues

The issues on appeal are:

1. Whether claims 1 to 31, 37 and 38 are unpatentable where Appellants' invention represents a classic reversal of long standing conventional practice and wisdom and Higgins, the primary reference in combination with other references to reject the claims, merely discloses the conventional approach and none of the secondary references supply the missing teachings.
2. Whether claims 18 to 26, 28 to 29, and 34 are unpatentable where the references do not suggest the desirability of combining what is disclosed therein to meet the terms of the rejected claims.
3. Whether claims 32 to 36 are unpatentable where the references relied upon do not disclose recited limitations.

(7) Grouping of Claims

The claims in each group do not stand or fall together.

(8) Summary of the Examiner's Reasons for the Rejection

In the Office Action of March 26, 2002, the Examiner removed all prior rejections of the claims over references to Marshall U.S. Patent 5,675,746, Risberg U.S. Patent 5,339,392 and Lauer U.S. Patent 5,523,769.

In the March 26, 2002 Office Action being appealed from the examiner set out five new bases for rejection of the claims. These rejections were all based on U.S. Patent No. 5,270,922 ("Higgins") taken alone or in various combinations with U.S. Patent No. 5,523,769 ("Lauer"), U.S. Patent No. 5,761,689 ("Rayson") and U.S. Patent No. 5,339,392 ("Risberg").

In the Office Action, the Examiner stated in part:

Higgins discloses "a data processing and communication system [that] ... comprising ... the means of a database that stores graphic symbols that represent entities whose financial instruments are identified by instrument identifiers in the feed and that can be accessed by financial instrument identifiers to provide graphic symbols corresponding to the financial instrument identifiers in the feed (Fig. 3, Abstract, lines 8-12, col. 6, line 16 to col. 7, line 28, and col. 9, lines 25-29); a display controller for forming display signals with the graphic symbols and values corresponding to financial instruments in the feed (col. 2, lines 15-18, col. 3, lines 30-40); ...

(9) Argument

- I. **Claims 1 to 31, 37 and 38 are distinct where appellants' invention defies long standing conventional practice and Higgins the primary reference merely restates prior conventional wisdom and the secondary references fail to supply the missing teachings.**

Appellants urge the Board to overturn a rejection of claims to an invention that, while perhaps appearing simple in hindsight, represents a classic reversal of long standing conventional practice and wisdom. The rejection is particularly unsound because the primary reference simply

restates the prior conventional wisdom, and the other references fail to supply the missing teachings of Appellants' invention.

The prior art conventional practice is described in Higgins, and is relied upon by the Examiner in each of his rejections. Higgins carries forward the age-old stock ticker symbol format, in which stock values are juxtaposed with alphabetic abbreviations representing the names of companies. For decades now, the proliferation of companies trading their stocks has produced an alphabet soup of often-arbitrary abbreviations that have made the various stock tickers difficult to follow and interpret. Yet, the alphabetic tradition is so engrained in history and culture that its use in financial displays has persisted since the inception of the ticker tape in the late 1860s.

Appellants' invention makes a sharp break from this tradition by displaying graphic symbols, such as a company logo, in juxtaposition with financial instrument values in an electronic display. In embodiments of the invention, the company logo and juxtaposed values are displayed as a logo-based stock ticker that moves across a monitor.

The Examiner relies on his primary reference Higgins for the use of graphic symbols. But Higgins actually is devoid of any teachings of graphic symbols in combination with financial values. In fact the word "graphic" is not mentioned once in Higgins, nor does Higgins teach any equivalent to a graphic symbol that represents an entity whose security is identified by instrument identifiers in a feed. Instead Higgins simply teaches the conventional alphabetic abbreviation stock ticker symbol.

Figure 2, item 143 in Higgins is illustrative of teaching of stock ticker symbols:

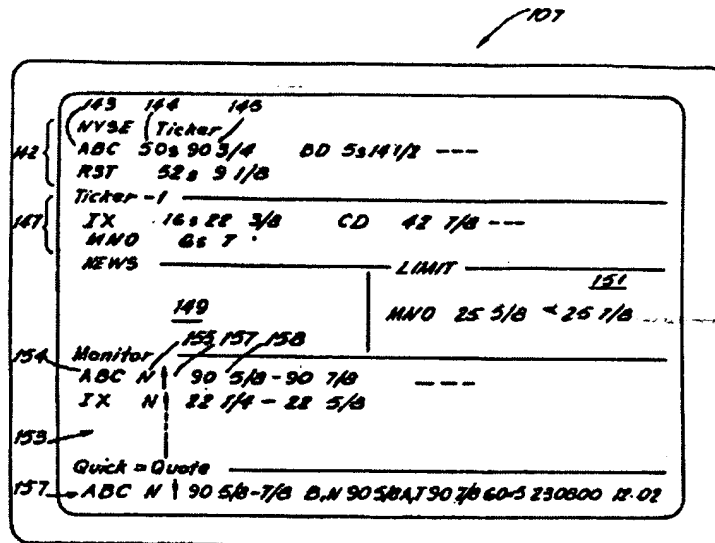


FIG. 2

Appellants' invention, to the contrary, presents a new and improved display of financial trading information. In particular, each of the independent claims of Appellants' invention is directed toward using *graphic symbols or company logos* instead of a security's alphabetic abbreviation in juxtaposition with the *values or textual data* of its trading information.

For example: claim 1 requires monitors to "render the *graphic symbols* and *values* corresponding to the financial instruments"; claim 15 requires monitors to display "*graphic symbols* and *values* corresponding to the financial instruments"; claim 16 requires displaying "*graphic symbols* and *values* corresponding to the financial instruments in the feed"; claim 17 recites scrolling market data comprising "a *company logo* juxtaposed with financial instruments including real-time *textual data*"; and claim 27 recites displaying market data comprising "a *company logo* and stock ticker real-time *textual data* associated with the company logo." (*Emphasis added*). Thus, each of Appellants' independent claims in this set is directed toward using graphic symbols, such as firm or corporate logos, to identify the actual values or textual data of a security's financial trading information.



The Examiner's rejections are contrary to fundamental doctrines governing the resolution of obviousness questions. Inventions are *not* obvious when they defy long standing conventional practice.

At law:

Obviousness

-----[P]roceeding contrary to the accepted wisdom is "strong evidence of unobviousness." *In re Hedges*, 783 F.2d 1038, 1041, 228 USPQ 685 (Fed. Cir. 1986) citing *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1552, 220 USPQ 303 (Fed. Cir. 1983).

Indeed, the years of use of conventional stock tickers and corporate logos by those of skill in the art without combining their properties weighs *strongly against* a finding that the combination is obvious. See *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 958 (Fed. Cir. 1997) (reversing a district court decision where "years of use of salty bait and of plastic lures, without combining their properties, weighs on the side of the unobviousness of the combination").

By ignoring these fundamental legal principles, the Examiner has resorted to hindsight reconstruction, an additional violation of settled authority:

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.<sup>15</sup> This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."<sup>16</sup> *In re Fritch*, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

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<sup>15</sup> *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

<sup>16</sup> *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600.

As the Federal Circuit Court of Appeals said in *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614 (Fed. Cir. 1999):

Measuring a claimed invention against the standard established by §103 requires the oft-difficult but critical step of casting the mind back to

the time of the invention, to consider the thinking of one of ordinary skill in the art, guided only by the references themselves.... Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the inventions can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.'

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification" *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Accordingly, the rejections to claims 1-31, 37 and 38 should be reversed.

**II. Claims 18 to 26, 28 to 29, and 34 are patentable where the references do not suggest the desirability of combining what is disclosed therein to meet the terms of the rejected claims.**

A number of the rejected dependent claims contain additional limitations that further weigh in favor of non-obviousness. In particular, dependent claims 18-26, 28-29, and 34 each require a bit map data corresponding to a company logo.

A review of Rayson fails to provide any motivation for its combination with Higgins and Lauer for rejecting claims 18 to 26, 28 and 29. Rayson does not relate to the display of financial information. Rayson describes an auto correcting text feature in a word processing application. The feature allows a user to select amongst a plurality of auto-correct options. These options allow the user to change straight quotes to smart quotes, correct words that begin with initial uppercase letters, modify capitalizing the first letter of any sentence that is not capitalized, and replace text entered by the user with either plain text, formatted text, a graphic picture or other type of object. Types of graphics that Rayson describes are a logo or a picture. In Rayson a user

manually configures the auto-correct feature to replace typed text with the graphic in a word processor document.

At law:

In determining obviousness, "[t]he claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 USPQ 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 USPQ 26, 31 (Fed. Cir. 1985).

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

When viewing the invention as a whole, it is clear that the prior art does not suggest the desirability of modifying Higgins and Lauer with Rayson. Neither Higgins nor Lauer motivate one of ordinary skill in the art to look to graphic symbols, corporate logos or bit map images to solve the identification problems resulting by the use of conventional stock ticker symbols. Moreover, Rayson does not suggest the desirability of replacing stock ticker symbols to juxtapose a graphic symbol with financial data. Thus, absent any suggestion to combine their teachings, there is no motivation found for using logos or bit map data in a manner taught and claimed by Appellants. Accordingly, claims 18-26, 28 and 29 are nonobvious over the art of record and the rejections of those claims should be reversed.

**III. Claims 32 to 36 are patentable for the additional reason that the reference relied upon does not disclose recited limitations.**

Claims 32 to 36 contain limitations that are not described by Higgins. For example, claim 32 requires accessing graphic symbols in accordance with extracted instrument identifiers and claim 36 requires retrieving graphics symbols associated with extracted identifiers. Higgins does not disclose, either explicitly or inherently, these limitations. The examiner considers that Higgins discloses, "a database that stores graphic symbols that represent entities whose financial instruments are identified by instrument identifiers." This is incorrect. Higgins discloses stock ticker alphabetical symbols not graphic symbols. Higgins stores the stock ticker symbols to form a list of followed stocks. Higgins does not use the stock ticker symbol to access a database of graphic symbols that represent entities whose financial instruments are identified by instrument identifiers. Rather, as clearly shown in FIG. 4 of Higgins, the stock ticker symbol from an incoming ticker message is used to access a database to see if it corresponds to one of stored stock ticker symbols on a user's followed stocks list or defined list of securities to construct a ticker. Nowhere does Higgins disclose or suggest that an identifier in an incoming stock ticker message is used to retrieve a graphic symbol that represents an entity's financial instrument identified by the ticker message.

At law:

**Anticipation**

A claim is "anticipated," when a single prior art reference discloses all features spelled out in the claim, either explicitly or inherently. *Tyler Refrigeration v. Kysor Indus. Corp.*, 777 F.2d 687, 689 (Fed. Cir. 1985); *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991); *Glaverbel Societe Anonyme v. Northlake Marketing & Supply, Inc.*, 45 F.3d 1550 (Fed. Cir. 1995).

Accordingly, Higgins cannot anticipate claims 32 and 36. Claim 32 requires displaying the financial instrument ticker, as a moving financial instrument ticker of graphic symbols juxtaposed with corresponding values of the financial instruments across a video display. Higgins does not describe this action and hence cannot anticipate claim 32 and dependent claims 33-35. Higgins also does not describe displaying on a monitor the graphic symbols juxtaposed

with values corresponding to the financial instruments, as in claim 36 and hence cannot anticipate claim 36. Accordingly, claims 32-36 are not anticipated by the art of record and the rejection of those claims should be reversed.

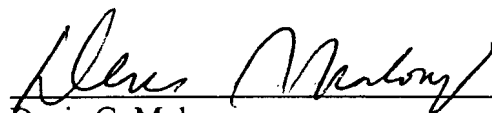
### Conclusion

For the foregoing reasons, it is submitted that the Examiner's rejections of claims 1-3, 6-13 and 15; claims 4-5 and 17-31; claims 32-36; claim 34; and claim 14 are erroneous, and reversal of the decision is respectfully requested.

The fee for submission of the brief of \$320 was already paid when the previous brief was submitted. We believe that no fee is due. If this is incorrect please charge this fee and apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 5/16/02

  
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### Appendix of Claims

1. A system for dynamically displaying graphic symbols and value information for financial instruments comprising:

an input port to receive a feed containing identifiers and corresponding values of financial instruments;

a filter to extract from the feed the identifiers and corresponding values of the financial instruments;

an input processor comprising a memory to store the extracted financial instrument identifiers and corresponding values;

a database that stores graphic symbols that represent entities whose financial instruments are identified by the instrument identifiers in the feed and that can be accessed by financial instrument identifiers to provide graphic symbols corresponding to the financial instrument identifiers in the feed;

a display controller for forming display signals with the graphic symbols and values corresponding to the financial instruments in the feed; and

a video wall including

a plurality of individual monitors arranged into a composite display, and with the display controller receiving the display signals to render the graphic symbols and values corresponding to the financial instruments in the feed on the individual monitors.

2. The system of claim 1 wherein the feed is a stock ticker feed and the financial instruments are stocks traded over an exchange.

3. The system of claim 2 wherein the values include the current trading price of the stocks.

4. The system of claim 3 wherein the graphic symbols include corporate logos for companies issuing the stocks.

5. The system of claim 4 further comprising:  
a control system and wherein the control system processes the display signals such that the video wall displays a moving ticker display of corporate logos and values of trades in stocks.
6. The system of claim 1 wherein the display controller further includes a plurality of display processors coupled to the input processor and each provided from a respective one of the plurality of display signals.
7. The system of claim 6 further including a network to couple the input processor to the plurality of display processors.
8. The system of claim 7 further including a control processor coupled to the display processors and the input processor via the network to synchronize the display processors.
9. The system of claim 1 wherein the display signals are fed to the individual monitors to render a different graphic symbol and associated financial data on each of the monitors.
10. The system of claim 6 wherein the feed is a stock ticker feed, and wherein the display processors include stock ticker display processors to display a moving stock ticker on the video wall.
11. The system of claim 1 wherein the video wall further includes video wall processors for processing the display signals for display on the monitors.
12. The system of claim 1 further including a plurality of routing switches coupled between the display controller and the video wall for controlling the routing of the display signals to the monitors.

13. The system of claim 1 further including a video source, coupled to the routing switches, for producing video signals for display on the video wall.

14. The system of claim 1 further including:  
an audio source for producing audio signals; and  
a speaker to produce the audio signals..

15. A system for dynamically displaying financial information comprising:  
a first input port for receiving a first feed containing identifiers and corresponding values of financial instruments;  
a second input port for receiving a second feed containing financial data;  
a filter to extract from the first feed the identifiers and corresponding values of the financial instruments and from the second feed the financial data;  
a memory to store the extracted financial instrument identifiers, corresponding values, and financial data;  
a data structure associating the extracted financial instrument identifiers with corresponding graphic symbols, the graphic symbols being publicly acknowledged identifiers of entities whose financial instruments are identified by the instrument identifiers in the feed;  
a video processor to produce a first display signal with the graphic symbols and values corresponding to the financial instruments in the feed and a second display signal with the financial data; and  
a video wall including  
a plurality of individual monitors arranged into a composite display to receive the first and second display signals and display the financial data and the graphic symbols and values corresponding to the financial instruments.

16. A method for dynamically displaying graphic symbols and value information for financial instruments on a video wall including a plurality of individual monitors arranged into a larger display, the method comprising:  
receiving a feed containing identifiers and corresponding values of financial instruments;



extracting from the feed the identifiers and corresponding values of the financial instruments;

storing the extracted financial instrument identifiers and corresponding values;

using the extracted financial instrument identifiers to find graphic symbols that are logos of entities associated with the extracted identifiers;

forming a display signal with the graphic symbols and values corresponding to the financial instruments in the feed; and

displaying on the video wall the graphic symbols and values corresponding to the financial instruments in the feed.

17. A system for displaying stock ticker information comprises:

a display; and

an electronic device that produces a signal that when fed to the display scrolls market data across the display, said market data comprising a company logo juxtaposed with financial information including real-time textual data associated with financial instruments of entities identified by instrument identifiers in a feed received by the system.

18. The system of claim 17 wherein the electronic device is a computer, and the computer is responsive to a source containing financial information and a source that contains bit map data corresponding to the company logo.

19. The system of claim 18 wherein the financial information includes company identifiers and wherein the company identifiers are used to access bit maps corresponding to the company logos.

20. The system of claim 18 wherein the source of bitmaps is contained in a database of logo bitmaps.

21. The system of claim 18 wherein the source containing financial information is a database of financial data.

22. The system of claim 18 wherein the real-time textual data scrolled on the display are updated according to market conditions.

23. The system of claim 22 further comprising a filter coupled to a source containing financial data, said filter extracting the real-time textual data and placing the real-time textual data in a database.

24. The system of claim 17 further comprising a correlator that correlates a bitmap of a company logo with financial data contained in a database.

25. The system of claim 24 wherein the real-time textual data scrolled on the display are updated according to market conditions.

26. The system of claim 24 further comprising a filter coupled to a source containing financial data, said filter extracting the financial data and placing the financial data in a database.

27. A method for displaying stock ticker information comprises:  
displaying market data across an electronic monitor, said market data comprising a company logo and stock ticker real-time textual data associated with the company logo, the real-time textual data juxtaposed with the company logo.

28. The method of claim 27 wherein displaying associates a data source containing financial information and a data source that contains bit map data corresponding to the company logo.

29. The method of claim 28 wherein the financial information includes company identifiers and wherein the company identifiers are used to access bit maps corresponding to the company logos.

30. The method of claim 27 wherein displaying market data occurs with market conditions.

31. The method of claim 27 further comprising filtering the source containing financial data, and extracting the data to place the data in a database.

32. A method for displaying stock ticker information comprises:  
extracting from a data feed having values of financial instruments, instrument identifiers and the values of the financial instruments;  
accessing graphic symbols in accordance with the extracted instrument identifiers;  
associating the graphic symbols with the corresponding values of the financial instruments to produce a financial instrument ticker; and  
displaying the financial instrument ticker, as a moving financial instrument ticker of graphic symbols juxtaposed with corresponding values of the financial instruments across a video display.

33. The method of claim 32 wherein the data feed of values includes identifiers that correspond to the financial instruments, and wherein accessing comprises:  
accessing the graphic symbols by using the identifiers to associate the graphic symbols with the financial data.

34. The method of claim 32 further comprising:  
correlating a bitmap of a company logo with financial information contained in a database.

35. The method of claim 32 further comprising  
updating data on the financial instrument ticker in accordance with current market conditions.

36. A method for dynamically displaying graphic symbols and value information for financial instruments, the method comprising:

receiving a feed containing identifiers and corresponding values of financial instruments;  
extracting from the feed the identifiers and corresponding values of the financial instruments;

retrieving graphic symbols associated with the extracted identifiers;

forming a display signal including the retrieved graphic symbols and values corresponding to the financial instruments; and

displaying on a monitor the graphic symbols juxtaposed with values corresponding to the financial instruments.

37. The system of claim 17 wherein the market data corresponds to trades in financial instruments and the company logo is associated with financial information corresponding to a market price for the financial instrument.

38. The method of claim 27 wherein the stock ticker information comprises trades of financial instruments.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant : Thomas Apple et al.                      Art Unit : 2672  
Serial No. : 08/736,143                                  Examiner : Blackman, A.  
Filed : October 28, 1996  
Title : MEDIA WALL FOR DISPLAYING FINANCIAL INFORMATION

Board of Patent Appeals and Interferences  
Commissioner for Patents  
Washington, D.C. 20231

BRIEF ON APPEAL

(1) Real Party in Interest

The NASDAQ Stock Market, Inc.

(2) Related Appeals and Interferences

None.

(3) Status of Claims

Claims 1-38 are in the case. (See Appendix of Claims)

Claims 1-3, 6-13, 15 and 16<sup>1</sup> were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins") in view of U.S. Patent No. 5,523,769 ("Lauer").

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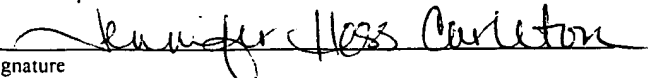
<sup>1</sup> Claim 16 was not mentioned in the summary of the Examiner's rejection but was treated as rejected in the body of this rejection.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

May 16, 2002

Date of Deposit

Signature 

Jennifer Hess Carleton

Typed or Printed Name of Person Signing Certificate

Claims 4-5, 17-31, 37 and 38<sup>2</sup> were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins") in view of U.S. Patent No. 5,523,769 ("Lauer") and further in view of U.S. Patent No. 5,761,689 ("Rayson").

Claims 32-36 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,270,922 ("Higgins").

Claim 34 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins") in view of U.S. Patent No. 5,761,689 ("Rayson").

Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,270,922 ("Higgins"), in view of U.S. Patent No. 5,761,689 ("Rayson"), further in view of U.S. Patent No. 5,523,769 ("Lauer") and still further in view of U.S. Patent No. 5,339,392 ("Risberg").

#### (4) Status of Amendments

No amendments have been filed after the Office Action of March 26, 2002 being appealed. Appellants filed a prior Brief on Appeal on December 10, 2001 that resulted in the Office Action being appealed from.

#### (5) Summary of Invention

##### I. Background

The invention relates to an improved mechanism for displaying financial trading information. As described in the Background of the Invention section of the application, alphabetic abbreviations (commonly referred to in the art as "stock ticker symbols") have been used to identify securities and their financial trading information since the days of paper, ticker tape reports. Later technologies have changed the medium of these reports from paper to electronic, but have not altered the means used to identify the financial trading information of a given security.

Many people interested in following securities, including some seasoned stock analysts, find the alphabet abbreviations in these displays difficult to follow. In particular, many people

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<sup>2</sup> Claims 37 and 38 were not mentioned in the summary of the Examiner's rejection but were treated as rejected in the body of this rejection.

find it difficult to remember more than a small subset of the many alphabetic abbreviations assigned by a given stock exchange. Compounding this problem is the fact that, due to historical anomalies and other factors, the assigned alphabetic abbreviations can appear random and may not even attempt to identify a particular traded security. In fact, some assigned alphabetic abbreviations may purport to identify a particular security of a well-known company, when in fact it actually identifies a security of a less well-known company.

## II. Appellants' Invention

The inventors of the pending application conceived of a new, more easily interpreted display for trading information. In particular, the inventors conceived using graphic symbols, such as firm or corporate logos, to replace alphabetic abbreviations as identifiers for values of each security's financial trading information in a financial display. Appellants' invention offers several non-obvious and important advantages over the older styled displays, including reduced confusion amongst traders observing the displayed financial information and increased brand awareness for the securities traded on an exchange employing the invention.

As is explained in detail below, the primary reference Higgins and the combination of references with Higgins on which rejections in the office action are based fall well short of describing or suggesting the claimed invention.

### (6) Issues

The issues on appeal are:

1. Whether claims 1 to 31, 37 and 38 are unpatentable where Appellants' invention represents a classic reversal of long standing conventional practice and wisdom and Higgins, the primary reference in combination with other references to reject the claims, merely discloses the conventional approach and none of the secondary references supply the missing teachings.
2. Whether claims 18 to 26, 28 to 29, and 34 are unpatentable where the references do not suggest the desirability of combining what is disclosed therein to meet the terms of the rejected claims.
3. Whether claims 32 to 36 are unpatentable where the references relied upon do not disclose recited limitations.

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The claims in each group do not stand or fall together.

(8) Summary of the Examiner's Reasons for the Rejection

In the Office Action of March 26, 2002, the Examiner removed all prior rejections of the claims over references to Marshall U.S. Patent 5,675,746, Risberg U.S. Patent 5,339,392 and Lauer U.S. Patent 5,523,769.

In the March 26, 2002 Office Action being appealed from the examiner set out five new bases for rejection of the claims. These rejections were all based on U.S. Patent No. 5,270,922 ("Higgins") taken alone or in various combinations with U.S. Patent No. 5,523,769 ("Lauer"), U.S. Patent No. 5,761,689 ("Rayson") and U.S. Patent No. 5,339,392 ("Risberg").

In the Office Action, the Examiner stated in part:

Higgins discloses "a data processing and communication system [that] ... comprising ... the means of a database that stores graphic symbols that represent entities whose financial instruments are identified by instrument identifiers in the feed and that can be accessed by financial instrument identifiers to provide graphic symbols corresponding to the financial instrument identifiers in the feed (Fig. 3, Abstract, lines 8-12, col. 6, line 16 to col. 7, line 28, and col. 9, lines 25-29); a display controller for forming display signals with the graphic symbols and values corresponding to financial instruments in the feed (col. 2, lines 15-18, col. 3, lines 30-40); ...

(9) Argument

- I. **Claims 1 to 31, 37 and 38 are distinct where appellants' invention defies long standing conventional practice and Higgins the primary reference merely restates prior conventional wisdom and the secondary references fail to supply the missing teachings.**

Appellants urge the Board to overturn a rejection of claims to an invention that, while perhaps appearing simple in hindsight, represents a classic reversal of long standing conventional practice and wisdom. The rejection is particularly unsound because the primary reference simply



restates the prior conventional wisdom, and the other references fail to supply the missing teachings of Appellants' invention.

The prior art conventional practice is described in Higgins, and is relied upon by the Examiner in each of his rejections. Higgins carries forward the age-old stock ticker symbol format, in which stock values are juxtaposed with alphabetic abbreviations representing the names of companies. For decades now, the proliferation of companies trading their stocks has produced an alphabet soup of often-arbitrary abbreviations that have made the various stock tickers difficult to follow and interpret. Yet, the alphabetic tradition is so engrained in history and culture that its use in financial displays has persisted since the inception of the ticker tape in the late 1860s.

Appellants' invention makes a sharp break from this tradition by displaying graphic symbols, such as a company logo, in juxtaposition with financial instrument values in an electronic display. In embodiments of the invention, the company logo and juxtaposed values are displayed as a logo-based stock ticker that moves across a monitor.

The Examiner relies on his primary reference Higgins for the use of graphic symbols. But Higgins actually is devoid of any teachings of graphic symbols in combination with financial values. In fact the word "graphic" is not mentioned once in Higgins, nor does Higgins teach any equivalent to a graphic symbol that represents an entity whose security is identified by instrument identifiers in a feed. Instead Higgins simply teaches the conventional alphabetic abbreviation stock ticker symbol.

Figure 2, item 143 in Higgins is illustrative of teaching of stock ticker symbols:

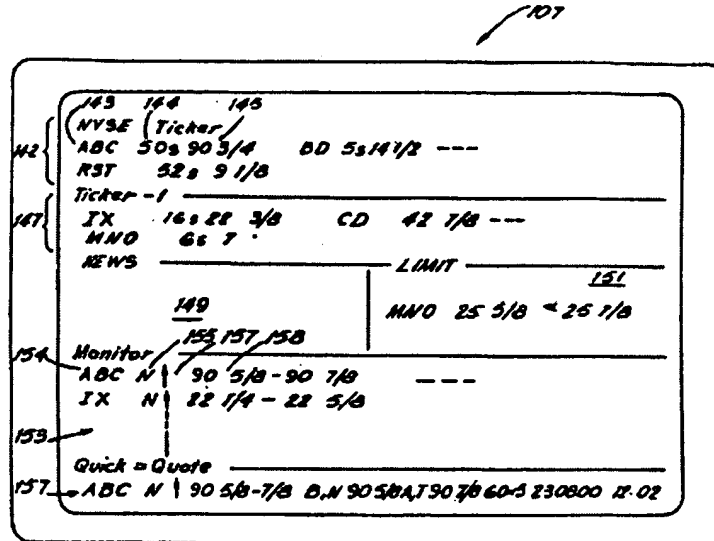


FIG. 2

Appellants' invention, to the contrary, presents a new and improved display of financial trading information. In particular, each of the independent claims of Appellants' invention is directed toward using *graphic symbols or company logos* instead of a security's alphabetic abbreviation in juxtaposition with the *values or textual data* of its trading information.

For example: claim 1 requires monitors to "render the *graphic symbols* and *values* corresponding to the financial instruments"; claim 15 requires monitors to display "*graphic symbols* and *values* corresponding to the financial instruments"; claim 16 requires displaying "*graphic symbols* and *values* corresponding to the financial instruments in the feed"; claim 17 recites scrolling market data comprising "a *company logo* juxtaposed with financial instruments including real-time *textual data*"; and claim 27 recites displaying market data comprising "a *company logo* and stock ticker real-time *textual data* associated with the company logo." (*Emphasis added*). Thus, each of Appellants' independent claims in this set is directed toward using graphic symbols, such as firm or corporate logos, to identify the actual values or textual data of a security's financial trading information.

The Examiner's rejections are contrary to fundamental doctrines governing the resolution of obviousness questions. Inventions are *not* obvious when they defy long standing conventional practice.

At law:

Obviousness

~~[P]roceeding contrary to the accepted wisdom~~ is "strong evidence of unobviousness." *In re Hedges*, 783 F.2d 1038, 1041, 228 USPQ 685 (Fed. Cir. 1986) citing *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1552, 220 USPQ 303 (Fed. Cir. 1983).

Indeed, the years of use of conventional stock tickers and corporate logos by those of skill in the art without combining their properties weighs *strongly against* a finding that the combination is obvious. See *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 958 (Fed. Cir. 1997) (reversing a district court decision where "years of use of salty bait and of plastic lures, without combining their properties, weighs on the side of the unobviousness of the combination").

By ignoring these fundamental legal principles, the Examiner has resorted to hindsight reconstruction, an additional violation of settled authority:

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.<sup>15</sup> This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."<sup>16</sup> *In re Fritch*, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

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<sup>15</sup> *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

<sup>16</sup> *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600.

As the Federal Circuit Court of Appeals said in *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614 (Fed. Cir. 1999):

Measuring a claimed invention against the standard established by §103 requires the oft-difficult but critical step of casting the mind back to

the time of the invention, to consider the thinking of one of ordinary skill in the art, guided only by the references themselves.... Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the inventions can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.'

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification" *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Accordingly, the rejections to claims 1-31, 37 and 38 should be reversed.

**II. Claims 18 to 26, 28 to 29, and 34 are patentable where the references do not suggest the desirability of combining what is disclosed therein to meet the terms of the rejected claims.**

A number of the rejected dependent claims contain additional limitations that further weigh in favor of non-obviousness. In particular, dependent claims 18-26, 28-29, and 34 each require a bit map data corresponding to a company logo.

A review of Rayson fails to provide any motivation for its combination with Higgins and Lauer for rejecting claims 18 to 26, 28 and 29. Rayson does not relate to the display of financial information. Rayson describes an auto correcting text feature in a word processing application. The feature allows a user to select amongst a plurality of auto-correct options. These options allow the user to change straight quotes to smart quotes, correct words that begin with initial uppercase letters, modify capitalizing the first letter of any sentence that is not capitalized, and replace text entered by the user with either plain text, formatted text, a graphic picture or other type of object. Types of graphics that Rayson describes are a logo or a picture. In Rayson a user

manually configures the auto-correct feature to replace typed text with the graphic in a word processor document.

At law:

In determining obviousness, "[t]he claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann-Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 USPQ 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 USPQ 26, 31 (Fed. Cir. 1985).

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

When viewing the invention as a whole, it is clear that the prior art does not suggest the desirability of modifying Higgins and Lauer with Rayson. Neither Higgins nor Lauer motivate one of ordinary skill in the art to look to graphic symbols, corporate logos or bit map images to solve the identification problems resulting by the use of conventional stock ticker symbols. Moreover, Rayson does not suggest the desirability of replacing stock ticker symbols to juxtapose a graphic symbol with financial data. Thus, absent any suggestion to combine their teachings, there is no motivation found for using logos or bit map data in a manner taught and claimed by Appellants. Accordingly, claims 18-26, 28 and 29 are nonobvious over the art of record and the rejections of those claims should be reversed.

**III. Claims 32 to 36 are patentable for the additional reason that the reference relied upon does not disclose recited limitations.**

Claims 32 to 36 contain limitations that are not described by Higgins. For example, claim 32 requires accessing graphic symbols in accordance with extracted instrument identifiers and claim 36 requires retrieving graphics symbols associated with extracted identifiers. Higgins does not disclose, either explicitly or inherently, these limitations. The examiner considers that Higgins discloses, "a database that stores graphic symbols that represent entities whose financial instruments are identified by instrument identifiers." This is incorrect. Higgins discloses stock ticker alphabetical symbols not graphic symbols. Higgins stores the stock ticker symbols to form a list of followed stocks. Higgins does not use the stock ticker symbol to access a database of graphic symbols that represent entities whose financial instruments are identified by instrument identifiers. Rather, as clearly shown in FIG. 4 of Higgins, the stock ticker symbol from an incoming ticker message is used to access a database to see if it corresponds to one of stored stock ticker symbols on a user's followed stocks list or defined list of securities to construct a ticker. Nowhere does Higgins disclose or suggest that an identifier in an incoming stock ticker message is used to retrieve a graphic symbol that represents an entity's financial instrument identified by the ticker message.

At law:

**Anticipation**

A claim is "anticipated," when a single prior art reference discloses all features spelled out in the claim, either explicitly or inherently. *Tyler Refrigeration v. Kysor Indus. Corp.*, 777 F.2d 687, 689 (Fed. Cir. 1985); *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991); *Glaverbel Societe Anonyme v. Northlake Marketing & Supply, Inc.*, 45 F.3d 1550 (Fed. Cir. 1995).

Accordingly, Higgins cannot anticipate claims 32 and 36. Claim 32 requires displaying the financial instrument ticker, as a moving financial instrument ticker of graphic symbols juxtaposed with corresponding values of the financial instruments across a video display. Higgins does not describe this action and hence cannot anticipate claim 32 and dependent claims 33-35. Higgins also does not describe displaying on a monitor the graphic symbols juxtaposed

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with values corresponding to the financial instruments, as in claim 36 and hence cannot anticipate claim 36. Accordingly, claims 32-36 are not anticipated by the art of record and the rejection of those claims should be reversed.

### Conclusion

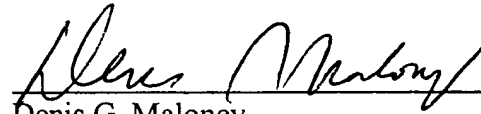
For the foregoing reasons, it is submitted that the Examiner's rejections of claims 1-3, 6-13 and 15; claims 4-5 and 17-31; claims 32-36; claim 34; and claim 14 are erroneous, and reversal of the decision is respectfully requested.

The fee for submission of the brief of \$320 was already paid when the previous brief was submitted. We believe that no fee is due. If this is incorrect please charge this fee and apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: \_\_\_\_\_

5/16/02



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### Appendix of Claims

1. A system for dynamically displaying graphic symbols and value information for financial instruments comprising:

an input port to receive a feed containing identifiers and corresponding values of financial instruments;

a filter to extract from the feed the identifiers and corresponding values of the financial instruments;

an input processor comprising a memory to store the extracted financial instrument identifiers and corresponding values;

a database that stores graphic symbols that represent entities whose financial instruments are identified by the instrument identifiers in the feed and that can be accessed by financial instrument identifiers to provide graphic symbols corresponding to the financial instrument identifiers in the feed;

a display controller for forming display signals with the graphic symbols and values corresponding to the financial instruments in the feed; and

a video wall including

a plurality of individual monitors arranged into a composite display, and with the display controller receiving the display signals to render the graphic symbols and values corresponding to the financial instruments in the feed on the individual monitors.

2. The system of claim 1 wherein the feed is a stock ticker feed and the financial instruments are stocks traded over an exchange.

3. The system of claim 2 wherein the values include the current trading price of the stocks.

4. The system of claim 3 wherein the graphic symbols include corporate logos for companies issuing the stocks.



5. The system of claim 4 further comprising:  
a control system and wherein the control system processes the display signals such that the video wall displays a moving ticker display of corporate logos and values of trades in stocks.

6. The system of claim 1 wherein the display controller further includes a plurality of display processors coupled to the input processor and each provided from a respective one of  
--the plurality of display signals.

7. The system of claim 6 further including a network to couple the input processor to the plurality of display processors.

8. The system of claim 7 further including a control processor coupled to the display processors and the input processor via the network to synchronize the display processors.

9. The system of claim 1 wherein the display signals are fed to the individual monitors to render a different graphic symbol and associated financial data on each of the monitors.

10. The system of claim 6 wherein the feed is a stock ticker feed, and wherein the display processors include stock ticker display processors to display a moving stock ticker on the video wall.

11. The system of claim 1 wherein the video wall further includes video wall processors for processing the display signals for display on the monitors.

12. The system of claim 1 further including a plurality of routing switches coupled between the display controller and the video wall for controlling the routing of the display signals to the monitors.

13. The system of claim 1 further including a video source, coupled to the routing switches, for producing video signals for display on the video wall.

14. The system of claim 1 further including:  
an audio source for producing audio signals; and  
a speaker to produce the audio signals..

15. A system for dynamically displaying financial information comprising:  
a first input port for receiving a first feed containing identifiers and corresponding values of financial instruments;  
a second input port for receiving a second feed containing financial data;  
a filter to extract from the first feed the identifiers and corresponding values of the financial instruments and from the second feed the financial data;  
a memory to store the extracted financial instrument identifiers, corresponding values, and financial data;  
a data structure associating the extracted financial instrument identifiers with corresponding graphic symbols, the graphic symbols being publicly acknowledged identifiers of entities whose financial instruments are identified by the instrument identifiers in the feed;  
a video processor to produce a first display signal with the graphic symbols and values corresponding to the financial instruments in the feed and a second display signal with the financial data; and  
a video wall including  
a plurality of individual monitors arranged into a composite display to receive the first and second display signals and display the financial data and the graphic symbols and values corresponding to the financial instruments.

16. A method for dynamically displaying graphic symbols and value information for financial instruments on a video wall including a plurality of individual monitors arranged into a larger display, the method comprising:  
receiving a feed containing identifiers and corresponding values of financial instruments;

extracting from the feed the identifiers and corresponding values of the financial instruments;

storing the extracted financial instrument identifiers and corresponding values;

using the extracted financial instrument identifiers to find graphic symbols that are logos of entities associated with the extracted identifiers;

forming a display signal with the graphic symbols and values corresponding to the financial instruments in the feed; and

displaying on the video wall the graphic symbols and values corresponding to the financial instruments in the feed.

17. A system for displaying stock ticker information comprises:

a display; and

an electronic device that produces a signal that when fed to the display scrolls market data across the display, said market data comprising a company logo juxtaposed with financial information including real-time textual data associated with financial instruments of entities identified by instrument identifiers in a feed received by the system.

18. The system of claim 17 wherein the electronic device is a computer, and the computer is responsive to a source containing financial information and a source that contains bit map data corresponding to the company logo.

19. The system of claim 18 wherein the financial information includes company identifiers and wherein the company identifiers are used to access bit maps corresponding to the company logos.

20. The system of claim 18 wherein the source of bitmaps is contained in a database of logo bitmaps.

21. The system of claim 18 wherein the source containing financial information is a database of financial data.

22. The system of claim 18 wherein the real-time textual data scrolled on the display are updated according to market conditions.

23. The system of claim 22 further comprising a filter coupled to a source containing financial data, said filter extracting the real-time textual data and placing the real-time textual data in a database.

24. The system of claim 17 further comprising a correlator that correlates a bitmap of a company logo with financial data contained in a database.

25. The system of claim 24 wherein the real-time textual data scrolled on the display are updated according to market conditions.

26. The system of claim 24 further comprising a filter coupled to a source containing financial data, said filter extracting the financial data and placing the financial data in a database.

27. A method for displaying stock ticker information comprises:  
displaying market data across an electronic monitor, said market data comprising a company logo and stock ticker real-time textual data associated with the company logo, the real-time textual data juxtaposed with the company logo.

28. The method of claim 27 wherein displaying associates a data source containing financial information and a data source that contains bit map data corresponding to the company logo.

29. The method of claim 28 wherein the financial information includes company identifiers and wherein the company identifiers are used to access bit maps corresponding to the company logos.

30. The method of claim 27 wherein displaying market data occurs with market conditions.

31. The method of claim 27 further comprising filtering the source containing financial data, and extracting the data to place the data in a database.

~~32.~~ A method for displaying stock ticker information comprises:  
extracting from a data feed having values of financial instruments, instrument identifiers and the values of the financial instruments;  
accessing graphic symbols in accordance with the extracted instrument identifiers;  
associating the graphic symbols with the corresponding values of the financial instruments to produce a financial instrument ticker; and  
displaying the financial instrument ticker, as a moving financial instrument ticker of graphic symbols juxtaposed with corresponding values of the financial instruments across a video display.

33. The method of claim 32 wherein the data feed of values includes identifiers that correspond to the financial instruments, and wherein accessing comprises:  
accessing the graphic symbols by using the identifiers to associate the graphic symbols with the financial data.

34. The method of claim 32 further comprising:  
correlating a bitmap of a company logo with financial information contained in a database.

35. The method of claim 32 further comprising  
updating data on the financial instrument ticker in accordance with current market conditions.

36. A method for dynamically displaying graphic symbols and value information for financial instruments, the method comprising:

receiving a feed containing identifiers and corresponding values of financial instruments;  
extracting from the feed the identifiers and corresponding values of the financial instruments;

retrieving graphic symbols associated with the extracted identifiers;

forming a display signal including the retrieved graphic symbols and values corresponding to the financial instruments; and

displaying on a monitor the graphic symbols juxtaposed with values corresponding to the financial instruments.

37. The system of claim 17 wherein the market data corresponds to trades in financial instruments and the company logo is associated with financial information corresponding to a market price for the financial instrument.

38. The method of claim 27 wherein the stock ticker information comprises trades of financial instruments.